APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,457	07/06/2001	Marcel Zvi Schreiber	3394p007x	4385

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EXAMINER
ROSWELL, MICHAEL

ART UNIT	PAPER NUMBER
2173	

DATE MAILED: 03/15/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.		Applicant(s)	
Office Action Summary	09/904,457		SCHREIBER ET AL.	
	Examiner		**Art Unit**	
	Michael Roswell		2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _25 March 2003_.
2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-100_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1-100_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _06 July 2002_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. _____.
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to because pertinent parts of Figures 2, 4A, 4B, and

22A-22E are illegible. A proposed drawing correction or corrected drawings are

required in reply to the Office action to avoid abandonment of the application. The

objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: information

pertaining to cross-related applications has been omitted.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of
making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 18, 45, 68, and 95 are rejected under 35 U.S.C. 112, first paragraph, as

failing to comply with the enablement requirement. As a result, dependant claims 46-50

and 96-100 are rejected. The claim(s) contains subject matter which was not described

in the specification in such a way as to enable one skilled in the art to which it pertains,

or with which it is most nearly connected, to make and/or use the invention. The

specification does not adequately describe how a logical term "is a single relation from

the ontology with instances specified for all but one parameter" and how an instance of

an instance document "is the element in the missing class from the domain of the

relation".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 10, 16, 23, 25-31, 34, 40-43, 51-57, 60, 66, 73, 75-81, 84, and 90-93

are rejected under 35 U.S.C. 102(b) as being anticipated by Chang et al (U.S. Patent

5,950,190), hereinafter referred to as Chang.

In regards to claims 1, 25, 51, and 75, Chang teaches a repository of class and

relation definitions (Column 19, Lines 38-44), a server for responding to queries relating

to class and relation definitions in the repository (Column 9, Lines 11-14, 19-24), and a

graphical user interface including icons for representing instances of classes (Column

13, Lines 40-42). Furthermore, Chang discloses the use of IDL files for storing generic

class and relation definitions in the repository (Column 17, Lines 33-38) to go along with

specific instances of classes stored in the repository. Chang also teaches the use of

the invention in a distributed client/server environment with multiple repositories, and an

embodiment of a single central Client Data Store Manager with a single ontology

directory functioning as a global ontology directory (Column 6, Lines 23-28).

In regards to claims 2, 26, 52, and 76, Chang describes the use of Persistent

Identifiers (PID) and Object Identifiers (OID) to provide unique identification keys for all

objects in the repository (Column 16, Lines 58-64) and shows them linked to the icon of

an instance (Column 16, Line 40).

In regards to claims 3, 27, 53, and 77, with respect to claim 2, it can be seen that

the PID and OID values are functions of the repository (Column 16, Lines 55-57).

In regards to claims 4, 28, 54, and 78, Chang allows for the unique identifiers to

be utilized in all tables and classes, which would include applicant's "largest class"

(Column 16, Lines 57-64).

In regards to claims 5, 29, 55, and 79, Chang associates an icon with an instance

view or table (Column 11, Lines 20-21).

In regards to claims 6, 30, 56, and 80, an icon is traditionally defined as a small

image displayed on screen available for user manipulation. Chang shows such class

icons in Figure 8, and describes their interaction with a user (Column 10, Lines 20-22).

In regards to claims 7, 31, 57, and 81, an icon is traditionally defined as a small

image displayed on screen available for user manipulation. Chang shows the transition

from the display of a class instance to that of a class icon (Column 13, Lines 39-42).

In regards to claims 10, 34, 60, and 84, Chang discloses the appearance of a

popup menu in response to a user clicking on a class icon, and includes in the menu

items the ability to add or change attributes of the class (Column 10, Lines 20-29).

In regards to claims 16 and 66, Chang shows in Figure 19 a collection of icons representing instances of classes.

In regards to claims 23 and 73, Chang shows in Figure 8 the presentation of subclass icons on the user interface.

In regards to claims 40, 43, 90, and 93, it can be seen in Figure 11 that Chang allows for the searching of given instances found in instance documents that are associated with an icon, and that the search results in Figure 12, where the instance, its icon and caption are displayed on screen (Column 13, Lines 25-32).

In regards to claims 41 and 91, Chang discloses the appearance of a popup menu in response to a user clicking on a class icon, and includes in the menu items the ability to add or change attributes of the class (Column 10, Lines 20-29).

In regards to claims 42 and 92, if the "Attributes" item of the instance popup menu is selected, a sub-menu is activated which allows the user to add or change attributes pertaining to the selected instance (Column 10, Lines 20-29).

Claim Rejections - 35 USC § 103

Claims 11-14, 17-22, 35-38, 45, 50, 61-64, 67-72, 85-88, 95, and 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang and Yeager et al (U.S. Patent 5,950,190), hereinafter referred to as Yeager.

In regards to claims 11, 35, 61, and 85, Chang teaches a repository of class and relation definitions (Column 19, Lines 38-44), a server for responding to queries relating

to class and relation definitions in the repository (Column 9, Lines 11-14, 19-24), and a graphical user interface including icons for representing instances of classes (Column 13, Lines 40-42). Chang also disclose a popup menu in response to a user clicking on a class icon, and includes in the menu items the ability to add or change attributes of the class (Column 10, Lines 20-29).

The difference between the claims and Chang is the claims recite a search tool for searching for functions within the class domain.

Yeager teaches a dynamic graphical user interface for relational database applications similar to the interface of Chang, and utilizing icons, classes, and repositories similar to applicant's claimed invention. Yeager further teaches a search tool for searching for functions within the domain of the class (Figure 4 and Column 10, Lines 11-22).

It would have been obvious to one of ordinary skill in the art, having the teachings of Chang and Yeager before him at the time of the invention to modify the graphical user interface for data stores of Chang to include the function search tool of Yeager in order to obtain a user interface dealing with classes and instances of classes where the interface allows for searching within classes for specific functions.

One would be motivated to make such a combination for the advantage of performing queries on classes and instances of classes with a user-friendly interface, allowing for the user to access data without prior knowledge of query language. See Yeager, Column 9, Lines 64-67 and Column 2, Lines 6-13.

In regards to claims 12, 36, 62, and 86, and with respect to claim 11 above, Yeager discloses the access of the relational database and the data dictionary across a network (Column 20, Lines 3-8), necessitating a function search over a network in that situation.

In regards to claims 13, 37, 63, and 87, and with respect to claim 11 above, Yeager shows a single repository for storing the relational database and data dictionary (Column 8, Lines 21-31), therefore performing any search over a central repository.

In regards to claims 14, 38, 64, and 88, with respect to claim 11 above, Yeager shows the search tool searching for functions within the domain of the selected class (Figure 4, Column 10, Lines 54-60), obtained through navigating the popup menu of Chang.

In regards to claims 17 and 67, Chang teaches a repository of class and relation definitions (Column 19, Lines 38-44), a server for responding to queries relating to class and relation definitions in the repository (Column 9, Lines 11-14, 19-24), and a graphical user interface including icons for representing instances of classes (Column 13, Lines 40-42).

The difference between Chang and the claims is the claims recite a collection of instances defined by a logical term.

Yeager teaches a dynamic graphical user interface for relational database applications similar to the interface of Chang, and utilizing icons, classes, and repositories similar to applicant's claimed invention. Yeager further teaches the use of logical terms to define a collection of classes (Figure 4 and Column 10, Lines 31-42).

It would have been obvious to one of ordinary skill in the art, having the teachings of Chang and Yeager before him at the time of the invention to modify the graphical user interface for data stores of Chang to include the refining of instances by way of a logical term.

One would be motivated to make such a combination for the advantage of obtaining a collection of instances having similar attribute values, and allowing the user to access specific information more quickly and easily. See Yeager, Column 11, Lines 29-33.

In regards to claims 18 and 68, and with respect to claims 17 and 67above, Yeager shows the use of operators such as intersection, union, and minus to provide the logical term for the instance browser (Column 10, Lines 42-45) to satisfy "instances specified for all but one parameter".

In regards to claims 19 and 69, and with respect to claims 17 and 67, Yeager discloses the ability to search for instances of a class with values for any number of class related parameters (Column 10, Lines 13-22).

In regards to claims 20 and 70, and with respect to claims 19 and 69above, Yeager discloses the access of the relational database and the data dictionary across a network (Column 20, Lines 3-8), necessitating a function search over a network in that situation.

In regards to claims 21 and 71, and with respect to claims 19 and 69 above, Yeager shows a single repository for storing the relational database and data dictionary (Column 8, Lines 21-31), therefore performing any search over a central repository.

In regards to claims 22 and 72, Yeager shows the use of mathematical modifiers to set bounds for the instance search tool (Column 10, Lines 31-38).

In regards to claims 45 and 95, Yeager shows in Figure 4 the ability to define a collection, search for instance documents and tuples of the relation (Column 9-10, Lines 63-67, 1-30), and have been shown *supra* to create icons for instances of classes.

In regards to claims 50 and 100, it can be seen in Figures 7-9 that Chang applies captions to the icons representing classes and instances of classes.

Claims 8, 9, 24, 32, 33, 44, 58, 59, 82, 83, and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang and Tuli (U.S. Patent 6,003,034).

In regards to claims 8, 9, 32, 33, 58, 59, 82, and 83, Chang teaches a repository of class and relation definitions (Column 19, Lines 38-44), a server for responding to queries relating to class and relation definitions in the repository (Column 9, Lines 11-14, 19-24), and a graphical user interface including icons for representing instances of classes (Column 13, Lines 40-42). An icon is traditionally defined as a small image displayed on screen available for user manipulation. Chang shows the transition from the display of a class instance to that of a class icon (Column 13, Lines 39-42).

The difference between the claims and Chang is the claims recite the definition of the function from instances to images from within the repository, and in an alternative, the user selects from a plurality of functions.

Tuli discloses linking icons to data units for systems such as Database Management Systems and networks utilizing an object oriented approach to storing and retrieving data, similar to the instance browser of Chang. Tuli teaches the representation of icons from a standard group of repository attributes (Column 2, Lines 3-6) and allows for the user to select an icon from an existing plurality (Column 1-2, Lines 64-67, 1).

It would have been obvious to one of ordinary skill in the art, having the teachings of Chang and Tuli before him at the time of the invention to modify the instance browser with image association of Chang with the ability to define the function from within the repository or be defined by the user as presented by Tuli to obtain an instance browser where instances are related to images either as defined by the instance repository or selectively by the user.

One would be motivated to make such a combination for the advantages of greater control over how instances are represented by icons in the instance browser, and allowing icons to have more relevance to instances. See Tuli, Column 1, Lines 60-64.

In regards to claim 24, 44, 74, and 94, Chang teaches a repository of class and relation definitions (Column 19, Lines 38-44), a server for responding to queries relating to class and relation definitions in the repository (Column 9, Lines 11-14, 19-24), and a graphical user interface including icons for representing instances of classes (Column 13, Lines 40-42).

Chang fails to disclose the use of a filter for separating instances, relations, or classes by authorship.

Tuli teaches a sort function similar to the disclosed filter for sorting files belonging to specific authors (Column 3, Lines 28-32).

It would have been obvious to one of ordinary skill in the art, having the teachings of Chang and Tuli before him at the time of the invention to modify the instance browser of Chang to include the sorting/filtering feature of Tuli to obtain a browser capable of sorting information based on authorship.

One would have been motivated to make such a modification for the advantage of convenient user-based arrangement of data by specified attributes. See Tuli, Column 3, Lines 25-27.

Claims 15, 39, 65, and 89 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Chang and Wical.

In regards to claims 15, 39, 65, and 89, Chang teaches a repository of class and

relation definitions (Column 19, Lines 38-44), a server for responding to queries relating

to class and relation definitions in the repository (Column 9, Lines 11-14, 19-24), and a

graphical user interface including icons for representing instances of classes (Column

13, Lines 40-42), and the appearance of a popup menu in response to a user clicking

on a class icon, and includes in the menu items the ability to add or change attributes of

the class (Column 10, Lines 20-29).

The difference between the claims and Chang is the claims recite the creation of

icons for values of listed functions.

Wical describes the use of icons that include numbers for displaying how many

documents are related to that specific category (Column 10, Lines 23-33). In this case,

the class of the instance browser would be the category presented, and the function of

the class would be the number of related articles.

It would have been obvious to one of ordinary skill in the art, having the

teachings of Chang and Wical before him at the time of the invention to modify the

instance browser of Chang to include the value-specific icons of Wical to obtain an

instance browser that displays specific values of functions of classes on screen.

One would be motivated to make such a combination for the obvious advantage

of allowing the user to see information about a class or category without having to see

all of the specifics of each class or category, and facilitating navigation of the data. See
Wical, Column 11-12, Lines 59-67, 1-9.

Claims 46-49 and 96-99 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Chang and Yeager as applied to claims 45 and 95 above, and further
in view of Tuli.

Chang and Yeager have been shown *supra* to define a collection, search for
instance documents and tuples of the relation (Yeager, Column 9-10, Lines 63-67, 1-
30), and have been shown *supra* to create icons for instances of classes.

Chang and Yeager fail to disclose the use of a filter for separating instance
documents by authorship.

Tuli teaches a sort function similar to the disclosed filter for sorting files belonging
to specific authors (Column 3, Lines 28-32).

It would have been obvious to one of ordinary skill in the art, having the
teachings of Chang and Tuli before him at the time of the invention to modify the
instance browser of Chang to include the sorting/filtering feature of Tuli to obtain a
browser capable of sorting information based on authorship.

One would have been motivated to make such a modification for the advantage
of convenient user-based arrangement of data by specified attributes. See Tuli, Column
3, Lines 25-27.

In regards to claims 47 and 97, and with respect to claims 46 and 96 above, Yeager discloses the access of the relational database and the data dictionary across a network (Column 20, Lines 3-8), necessitating a function search over a network in that situation.

In regards to claims 48 and 98, and with respect to claim 46 and 96above, Yeager shows a single repository for storing the relational database and data dictionary (Column 8, Lines 21-31), therefore performing any search over a central repository.

In regards to claims 49 and 99, with respect to claim 46 and 96 above, Yeager shows the search tool searching for functions within the domain of the selected class (Figure 4, Column 10, Lines 54-60), obtained through navigating the popup menu of Chang.
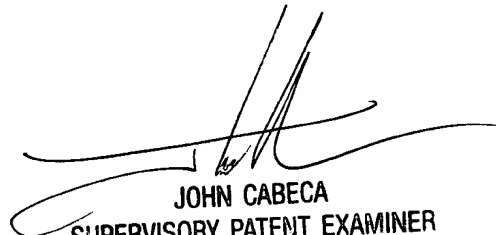
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Roswell whose telephone number is (703) 305-5914. The examiner can normally be reached on 8:30 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (703) 308-3116. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Application/Control Number: 09/904,457
Art Unit: 2173

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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Status information for unpublished applications is available through Private PAIR only.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Michael Roswell
3/1/2004

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